

CLAIMS

1. A pulmonary evaluation device comprising:-

- sensor means adapted to sense fluctuations in a user's lung operation; and
- 5 - feedback means, driven by said sensor means, for determining successive values representative of the user's lung fluctuations and adapted to translate said values into appropriate lung-evaluating information;

10 characterised by the feature that the sensor means comprises or forms part of an item suitable to be worn by or carried adjacent the user.

2. A device according to claim 1, wherein the item engages the user's body, when in use, so as to follow body movements caused by the user's lung operation.

15 3. A device according to either claim 1 or claim 2, wherein said sensing means incorporate:

- an inner wall and an outer wall forming a chamber therebetween; and
- 20 - at least one sensor adapted to sense pressure values within said chamber.

4. A device according to claim 3 incorporating an array of chambers, each chamber being located over a separate region of the user.

25 5. A device according to claim 3 or claim 4, wherein

the inner wall is substantially resilient and

30 the outer wall is substantially rigid in relation to the inner wall, whereby the inner wall may follow, in use, the movement caused by the user's lung operation whilst the outer wall remains substantially rigid.

6. A device according to any preceding claim, wherein said item is an armband.

7. A device according to any preceding claim, wherein said item is a vehicle seatbelt.
8. A device according to claim 1, wherein said sensor means is a camera whereby  
5 said camera captures successive images of the user's lung fluctuations.
9. A pulmonary evaluation device substantially as described with reference to and as illustrated in any appropriate combination of the accompanying text and drawings.

## AMENDED CLAIMS

**[Received by the International Bureau on 13 December 2004 (13.12.04)  
original claims 1-9 replaced by amended / new claims 1-6 (2 pages)].**

CLAIMS

1. A pulmonary evaluation device comprising:

- an item suitable to be worn over the user's body in order to follow body movements caused by the user's lung operation;
- sensor means for sensing fluctuations in a user's lung operation; and
- feedback means, driven by said sensor means, for determining successive values representative of the user's lung fluctuations and adapted to translate said values into appropriate lung-evaluating information;

wherein the item has one or more chambers formed between one or more inner and outer walls which are so sized and shaped to span or collectively span the entire lung region of the user's body, whereby as the user's body displaces due to respiration said inner walls follow the displacement and said sensor means sense the pressure within said chambers.

2. A device according to claim 1, wherein the or each chamber contains a gas.

3. A device according to claim 2, wherein the chambers are sealed, whereby the volume of gas contained by the chambers remains constant and as the body displaces during respiration, a measurable change in internal chamber pressure occurs as the chambers' wall displaces.

4. A device according to any of the preceding claims, incorporating an array of chambers, each chamber being located over a separate region of the user's lung.

5. A device according to any of the preceding Claims, wherein

the or each inner wall is substantially resilient and

the or each outer wall is substantially rigid in relation to the or each inner wall, whereby the inner wall may follow, in use, the movement caused by the user's lung operation whilst the outer wall remains substantially rigid.

6. A pulmonary evaluation device substantially as described with reference to and as illustrated in any appropriate combination of the accompanying text and drawings.